Title (en)

COMPILE-TIME BOUNDS CHECKING FOR USER-DEFINED TYPES

Title (de)

BINDUNGSPRÜFUNG ZUR COMPILEZEIT FÜR BENUTZERDEFINIERTE TYPEN

Title (fr)

VÉRIFICATION DE LIMITES LORS DE LA COMPILATION POUR DES TYPES DÉFINIS PAR L'UTILISATEUR

Publication

EP 2622466 B1 20190410 (EN)

Application

EP 11831155 A 20110909

Priority

- US 89229110 A 20100928
- US 2011051023 W 20110909

Abstract (en)

[origin: US2012079465A1] Compile-time optimized bounds checking of user-defined types is provided. A user-defined class has an annotated memory-accessing method, and an annotated bound-providing member such as an integer field containing a bound or a method that returns a bound when called. The user-defined-bounds check may supply bounds checking where the programming language has none, or it may supplement existing bounds checks, e.g., by wrapping a built-in array type or a garbage-collector-managed type. Bounds checking can be extended beyond arrays and other types whose layout is controlled by a compiler, allowing efficient systems programming in a managed code environment. A bounds-check representation is inserted by the compiler in intermediate language code. Optimization then reduces duplicative bounds checking.

IPC 8 full level

G06F 8/41 (2018.01)

CPC (source: EP KR US)

G06F 8/40 (2013.01 - KR); **G06F 8/423** (2013.01 - EP US); **G06F 8/437** (2013.01 - EP US); **G06F 8/443** (2013.01 - EP US); **G06F 9/06** (2013.01 - KR); **G06F 9/30** (2013.01 - KR)

Cited by

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US 2012079465 A1 20120329; **US 8533695 B2 20130910**; CA 2810986 A1 20120412; CN 102402451 A 20120404; CN 102402451 B 20140723; EP 2622466 A1 20130807; EP 2622466 A4 20141001; EP 2622466 B1 20190410; ES 2733516 T3 20191129; JP 2013539130 A 20131017; JP 5893038 B2 20160323; KR 101786156 B1 20171016; KR 20130101037 A 20130912; WO 2012047447 A1 20120412

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